

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-65. (canceled)

66. (Currently amended) A diagnostic kit comprising an isolated monoclonal antibody, or a fragment thereof, that

a) binds EAI polypeptide of *B. anthracis* and

b) specifically binds spores [[or]] and vegetative cells of *B. anthracis* ~~relative to~~
but not the spores or vegetative cells of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis*.

67. (Previously presented) The diagnostic kit of claim 66 further comprising a colloidal particle based lateral flow detection system.

68. (Previously presented) The diagnostic kit of claim 66 further comprising a detection system selected from a carbon based lateral flow system; a fluorescent based assay system, a chemiluminescent system, an up converting phosphors system, a refractive indexed based detection system, a magnetic bead or latex bead system, and a micro array system.

69. (Currently amended) A diagnostic kit comprising an isolated monoclonal antibody, or a fragment thereof, that

a) binds EAI polypeptide of *B. anthracis* and

b) specifically binds spores of *B. anthracis* ~~relative to~~ but not spores of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis*; and further comprises a colloidal particle based lateral flow detection system.

70. (Previously presented) The diagnostic kit of claim 66, wherein said antibody, or a fragment thereof, does not bind *B. cereus*.

71. (Previously presented) The kit of claim 66, wherein said antibody or fragment thereof is *B. anthracis* species specific.

72. (Currently amended) The kit of claim 66, wherein said antibody is an IgA, IgD, IgE, IgG, or IgM.

73. (Previously presented) The kit of claim 66, wherein said antibody or fragment thereof binds to SEQ ID NO:1 or an antigenic portion thereof.

74. (Previously presented) The kit of claim 66, wherein said antibody or fragment thereof specifically binds *B. anthracis* spores.

75. (Previously presented) The kit of claim 66, wherein said antibody or fragment thereof specifically binds *B. anthracis* vegetative cells.

76. (Previously presented) The kit of claim 66, wherein said antibody is a murine antibody; a rabbit antibody; a rat antibody; a genetically engineered antibody; a recombinant antibody; a humanized antibody; a polyclonal antibody or an affinity-purified antibody.

77. (Previously presented) The kit of claim 66, wherein said fragment is an Fab or Fv fragment.

78. (Previously presented) The kit of claim 66, wherein said antibody is produced by a hybridoma deposited with ATCC and accorded accession number PTA-2632.

79. (Currently amended) An isolated monoclonal antibody, or fragment thereof, that

a) binds EA1 polypeptide of *B. anthracis* and

b) specifically binds spores ~~[[or]]~~ and vegetative cells of *B. anthracis* ~~relative to~~
but not the spores or vegetative cells of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B.*
licheniformis.

80. (Previously presented) The antibody or fragment thereof of claim
79, wherein said antibody or fragment thereof is *B. anthracis* species specific.

81. (Currently amended) The antibody of claim 79, wherein said
antibody is an IgA, IgD, IgE, IgG, or IgM.

82. (Previously presented) The antibody or fragment thereof of claim
79, wherein said antibody or fragment thereof binds to SEQ ID NO:1 or an antigenic portion
thereof.

83. (Previously presented) The antibody or fragment thereof of claim
79, wherein said antibody is a murine antibody; a rabbit antibody; a rat antibody; a genetically
engineered antibody; a recombinant antibody; a humanized antibody; a polyclonal antibody; an
affinity-purified antibody; or an antibody produced by a hybridoma deposited with ATCC and
accorded accession number PTA-2632.

84. (Previously presented) The antibody or fragment thereof of claim
79, wherein said fragment is an Fab or Fv fragment.

85. (Currently amended) A method of detecting *B. anthracis* spores or
cells in a sample, said method comprising
contacting ~~[[an]]~~ a monoclonal antibody, or fragment thereof, ~~according to claim~~
~~79 that specifically binds spores and vegetative cells of *B. anthracis* but not the spores or~~
vegetative cells of *B. thuringiensis*, *B. cereus*, *B. globigii*, and *B. licheniformis* with a sample to
form a complex ~~between~~ comprising said antibody, or fragment, and ~~said *B. anthracis* in said~~
sample spores or cells, and

detecting said complex, which contains *B. anthracis* spores or cells from said sample.

86. (New) The method of claim 85, wherein said antibody or fragment thereof binds EA1 polypeptide of *B. anthracis*.

87. (New) The method of claim 85, wherein said antibody or fragment thereof is *B. anthracis* species specific.

88. (New) The method of claim 85, wherein said antibody is an IgA, IgD, IgE, IgG, or IgM.

89. (New) The method of claim 85, wherein said antibody or fragment thereof binds to SEQ ID NO:1 or an antigenic portion thereof.

90. (New) The method of claim 85, wherein said antibody is a murine antibody; a rabbit antibody; a rat antibody; a genetically engineered antibody; a recombinant antibody; a humanized antibody; a polyclonal antibody; or an affinity-purified antibody.

91. (New) The method of claim 85, wherein said fragment is an Fab or Fv fragment.

92. (New) The method of claim 85, wherein said antibody is produced by a hybridoma deposited with ATCC and accorded accession number PTA-2632.

93. (New) The method of claim 85, wherein said contacting comprises a colloidal particle based lateral flow detection system.

94. (New) The method of claim 85, wherein said detecting comprises a detection system selected from a carbon based lateral flow system; a fluorescent based assay system, a chemiluminescent system, an up converting phosphors system, a refractive indexed based detection system, a magnetic bead or latex bead system, and a micro array system.

95. (New) The method of claim 85, wherein said complex comprises
B. anthracis spores.

96. (New) The method of claim 85, wherein said complex comprises
B. anthracis cells.